Test Report
Rate of Spread of Tack Coat

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Location	At Site
Material	Bitumen
Sample No	9
Date	13-Apr-2018

Sl. No.	Determination	Unit	Test No 1		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.641	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.659	1.658	1.655
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.018	0.017	0.014
6	Rate of spread (d/a)	kg / m^2	0.450	0.425	0.350
7	Average	kg / m^2	0.408		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Prime Coat / Tack Coat is: 0.408 kg / m2

Note:

i. The results indicated above are based on the tests carried out on the sample at site.

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Yelahanka Zone
Bangalore

Test Report
Rate of Spread of Tack Coat

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Location	At Site
Material	Bitumen
Sample No	10
Date	15-Apr-2018

Sl. No.	Determination	Unit	Test No 1		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.648	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.659	1.654	1.655
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.018	0.006	0.014
6	Rate of spread (d/a)	kg / m^2	0.450	0.150	0.350
7	Average	kg / m^2	0.317		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Prime Coat / Tack Coat is: 0.317 kg / m2

Note:

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Bangalore

Test Report
Rate of Spread of Tack Coat

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Location	At Site
Material	Bitumen
Sample No	11
Date	15-Apr-2018

Sl. No.	Determination	Unit	Test No 1		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.641	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.659	1.657	1.653
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.018	0.016	0.012
6	Rate of spread (d/a)	kg / m^2	0.45	0.4	0.3
7	Average	kg / m^2	0.383		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Prime Coat / Tack Coat is: 0.383 kg / m2

Note:

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Test Report
Rate of Spread of Tack Coat

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Location	At Site
Material	Bitumen
Sample No	12
Date	15-Apr-2018

Sl. No.	Determination	Unit	Test No 1		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.648	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.658	1.656	1.652
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.017	0.015	0.011
6	Rate of spread (d/a)	kg / m^2	0.425	0.375	0.275
7	Average	kg / m^2	0.358		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Prime Coat / Tack Coat is: 0.358 kg / m2

Note:

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Test Report
Aggregate Impact Value

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Site
Material	Coarse Aggregate
Sample No	1
Date	9-Apr-2018

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1307	1309
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	347	349
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	81	83
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	266	266
6	Aggregate Impact Value (w4 / w3)x100	%	23.34	23.78
7	Specified Limit	%	24	

Results: Average Aggregate Impact Value: **23.56** %

Note:

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Test Report
Aggregate Impact Value

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Site
Material	Coarse Aggregate
Sample No	2
Date	10-Apr-2018

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1312	1314
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	352	354
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	79	81
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	273	273
6	Aggregate Impact Value (w4 / w3)x100	%	22.44	22.88
7	Specified Limit	%	24	

Results: Average Aggregate Impact Value: **22.66** %

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Test Report
Aggregate Impact Value

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Site
Material	Coarse Aggregate
Sample No	3
Date	11-Apr-2018

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1317	1319
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	357	359
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	77	79
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	280	280
6	Aggregate Impact Value (w4 / w3)x100	%	21.57	22.01
7	Specified Limit	%	24	

Results: Average Aggregate Impact Value: **21.79** %

Note:

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Test Report
Aggregate Particle Shape

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Hot Mix Plant
Material	Coarse Aggregates
Sample No	1
Date	9-Apr-2018

I.S. Sieves Size		Weight of Retained Sample on Each Sieve (minimum 200 Pieces) (gm)	Flakiness Index		Elongation Index	
Passing through IS Sieves (mm)	Retained on IS Sieves (mm)		Thickness Gauge	Weight of Aggregates in each fraction passing on thickness gauges (gm)	Length Gauge	Weight of Aggregates in Fraction retained on length gauges (gm)
63	50	0	33.9	0	-	0
50	40	0	27	0	81	0
40	25	0	19.5	0	58.5	0
31.5	25	0	16.95	0	-	0
25	20	1555	13.5	235	40.5	253
20	16	1443	10.8	122	32.4	149
16	12.5	953	8.55	148	25.6	155
12.5	10	463	6.75	65	20.2	71
10	6.3	232	4.89	54	14.7	61
	SW	4646	SWf	624	SWe	689

Flakiness Index 13.43 %

Elongation Index 14.83 %

Combined Flakiness and Elongation Indices : 28.26 %

Comments: Maximum allowable Combined Flakiness and Elongation Indices for Bituminous Concrete is 35%.

Note:

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Bangalore

Test Report
Aggregate Particle Shape

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Hot Mix Plant
Material	Coarse Aggregates
Sample No	2
Date	10-Apr-2018

I.S. Sieves Size		Weight of Retained Sample on Each Sieve (minimum 200 Pieces) (gm)	Flakiness Index		Elongation Index	
Passing through IS Sieves (mm)	Retained on IS Sieves (mm)		Thickness Gauge	Weight of Aggregates in each fraction passing on thickness gauges (gm)	Length Gauge	Weight of Aggregates in Fraction retained on length gauges (gm)
63	50	0	33.9	0	-	0
50	40	0	27	0	81	0
40	25	0	19.5	0	58.5	0
31.5	25	0	16.95	0	-	0
25	20	1560	13.5	240	40.5	258
20	16	1448	10.8	127	32.4	154
16	12.5	958	8.55	153	25.6	160
12.5	10	468	6.75	70	20.2	76
10	6.3	237	4.89	59	14.7	66
	SW	4671	SWf	649	SWe	714

Flakiness Index 13.89 %

Elongation Index 15.29 %

Combined Flakiness and Elongation Indices : 29.18 %

Comments: Maximum allowable Combined Flakiness and Elongation Indices for Bituminous Concrete is 35%.

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Test Report
Aggregate Particle Shape

Project Name	Improvements of roads for layout where the Cauvery and UGD works are in progress in Ward No.05 and Ward No.06 Byatarayanapura Sub Division
Client	Executive Engineer Project Yellahanka Division
Job No	MCTPL/BBMP/Project Division Yelahanka ZONE /P-7/1/2017-2018
Mix Type	Bituminous Concrete (BC)
Contractor	Sri. R. Satheesh
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Hot Mix Plant
Material	Coarse Aggregates
Sample No	3
Date	11-Apr-2018

I.S. Sieves Size		Weight of Retained Sample on Each Sieve (minimum 200 Pieces) (gm)	Flakiness Index		Elongation Index	
Passing through IS Sieves (mm)	Retained on IS Sieves (mm)		Thickness Gauge	Weight of Aggregates in each fraction passing on thickness gauges (gm)	Length Gauge	Weight of Aggregates in Fraction retained on length gauges (gm)
63	50	0	33.9	0	-	0
50	40	0	27	0	81	0
40	25	0	19.5	0	58.5	0
31.5	25	0	16.95	0	-	0
25	20	1565	13.5	245	40.5	263
20	16	1453	10.8	132	32.4	159
16	12.5	963	8.55	158	25.6	165
12.5	10	473	6.75	75	20.2	81
10	6.3	242	4.89	64	14.7	71
	SW	4696	SWf	674	SWe	739

Flakiness Index 14.35 %

Elongation Index 15.74 %

Combined Flakiness and Elongation Indices : 30.09 %

Comments: Maximum allowable Combined Flakiness and Elongation Indices for Bituminous Concrete is 35%.

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